

1848 to 1895, and combining the months as for magnetic disturbance, we find :—

Number of Days of Aurora in London, 1848 to 1895.

Spring.	Summer.	Autumn.	Winter.
57	14	63	43
	Near equinoxes 120.		
	Near solstices 57.		

Here is a seasonal variation similar to that in number of days of magnetic disturbance, and here also the spring and autumn maxima occur in the months of February and October respectively. In higher latitudes the seasonal variation of the aurora is different, showing the local terrestrial effect to be different at different places on the Earth's surface ; is it also different in the case of number of days of magnetic disturbance ?

Observations of the Sun during 1901 May 17, 18, and 20, at Mells, near Frome, 10 miles due south of Bath. By Maures Horner.

On several occasions I have tried to examine the edge of the solar surface before and after a total eclipse in order to ascertain whether the prominences and metallic eruptions, which are seen by means of the spectroscope at other times compare in size and shape with the phenomena of a total eclipse.

In May last there was an opportunity of observing the Sun while the total eclipse was actually in progress, but owing to the screen of east wind haze—so persistent all through the spring—it was impossible to get satisfactory results, although the sky was remarkably free from cirrus and cumulus. On Friday, the 17th, I sketched the contour fairly accurately, using on the 5-inch Cooke one prism of very dense Iena glass by Hilger, which gives almost perfect definition, and widely separates the sodium lines with a low power. The drawing shows little solar activity, the E.N.E. limb alone displaying a certain amount of disturbance, probably due to the collection of small spots which came into view on the 19th. Further south, on the same side, was a fairly large prominence, with the peculiarity of a curious patch of bright colour between the two points. The same elevated bright cloud appearance was also visible in the south-west quadrant west of two rather dim forms at about 200° , which were quite conspicuous whenever the haze became a little more transparent. On the north-west limb there was a long attenuated form and a bright spot at the exact west point. With these exceptions the Sun's limb was practically undisturbed.

The haze was bad enough at noon on Friday, and therefore at 5.30 on Saturday morning there was not much probability of any

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useful observation. However, I got up and carefully examined the most likely places to the east north-east and south south-west. At the former, near 83° , there were two brightish forms leaning southwards, whilst at 200° the double prominence of the day before had taken a more pyramidal shape of rather distinct outline. On the extreme north limb the surface was exactly like short soft hairs, quite different from the south, where the surface was smooth, with a long, attenuated filament pointing to two small spots rising from the surface. Later in the morning, when the haze had cleared off somewhat, I tried for the so-called coronal line No. 1474, which was at first quite easily observed. It was very plain just below the east point at 100° , also above at 60° , less so at 40° , and then again west of the north point there seemed to be another extension about 340° , and from there until 300° it was fairly strong, but invisible after that either on account of the haze or else from real solar causes.

These observations were very disappointing, and the more so because the Sun was free from cloud. However, on Monday, the 20th, a sensational phenomenon deserves some record. After observing the small group of spots above referred to, I found a feeble prominence and managed to show it, not without a good deal of difficulty, to a friend who had never seen one before. Then, continuing round the limb, we reached the north part, and found a bright prominence of a curiously rounded dome-like form. This my friend saw without the smallest difficulty. As it was close on noon, I turned away to explain the sidereal clock and set watches. We certainly did not leave the telescope for more than five minutes, but on examining the limb again I found that the prominence had totally disappeared. I have seen many wonderful changes, but never such a sudden extinction of a bright but apparently not very active eruption. There could be no doubt about it, as the north part is much the most easily observed portion of the solar limb.

Solar Eclipse 1901 May 18. By W. Ernest Cooke,
Government Astronomer.

Partial phase observed at the Perth Observatory, Western Australia.

			h	m	s	
First contact	1901 May 17,	17	13	26.64		G.M.T.
Last	„ „	18	54	06.10		„

Weather cloudy and showery, but Sun's limb was clear at both contacts, and observations considered good.

Perth Observatory, W.A.:
1901 May 18.
